302 751 Men and women make rings around their eyes with kohl; they put it not only on the eyebrows, but especially at the roots of the eyelashes. They do this for medical purposes, for they attribute [164] to kohl the ability to protect them against eye maladies, in particular against ophthalmia which strikes many of them.

[326] The Tuareg appreciate the long, narrow hands of people who do no manual labor. They do not take any particular [412 531 212] care of them and are satisfied merely to cut their nails rather short. As they do for hair, they bury the scraps so that no one can take them.

Fig. 36. Hairdressing knife, bearing the name of the artisan who made it in tifinagh characters.

304 [171] Tattooing. -- Make-up. -- Unlike the Kabyle and the Berbers, the Tuareg are not tattooed. This detail, which may seem insignificant, nevertheless indicates that the relationship of these different human groups is not nearly as close as one might believe, since there are such appreciable differences in mores.

184 304 Some women blue their gums and sometimes their lips by tattooing them, but this custom is particularly prevalent in the Sudanese tribes of the Timbuktu region.

302 [151] [517] On the other hand, make-up is used on a large scale among Tuareg women. They put red ocher on their faces to protect the skin from the /260/ sun. For aesthetic reasons they also blue their lips and around their mouths with indigo.

278 of trust. Every time they take a caravan down south, they purchase [439] many drugs, either for their personal use or to resell in their country or at In-Salah.

•164 There are not many diseases in the Ahaggar. The country is relatively healthy because of its very dry climate /261/ and the bracing action of the sun, which at the same time destroys microbic germs. Moreover, this is very fortunate, for with the small amount of hygiene practiced by the Tuareg it would be impossible to fight disease. It may also be true that this absence of hygiene stems from the fact that the Tuareg have not had to see the necessity of it.

[165 731] The Ahaggar people die of old age or of war wounds. Of course, there are sometimes epidemics capable of doing damage, but they are rare because of the isolation of the camps. The great distances which separate one from the other are a natural defense against mass contagions. These epidemics always come through the medium [361] of the caravaneers or the people who return from the Sudan, where they have stayed among sedentary people. We may mention smallpox, very common in the Sudan, which sometimes works great ravages in the tribes. Typhus, spread by lice, may decimate a whole tribe in a few days, and it is not uncommon among the Tuareg. But these two diseases are the exception when they are reported in [151] the Ahaggar. When a man returning from the Sudan is stricken with one of them, his case is reported by messengers long before his arrival, and the sick man is systematically isolated.

753 The Tuareg under the circumstances recognize the state of contagion, but they do not see the causes of disease. According to [771] them, it is caused by the action of bad genii. As good Moslems, they pretend not to believe in these genii, but in reality most of the talismans they wear on their persons are intended to protect them from these. To obtain them, they go to the marabouts or to men [156] with a reputation for their knowledge of the occult sciences; these sorcerers are known as amekelléou.

claim that this blue tint is excellent for the health. As in the Tidikelt, a white garment is not fit to wear until it has been sufficiently tinted blue by contact with "chegga."

The Tuareg value our medicines, "asafar" ⵓⵙⴼⴰⵔ, plural "isefran" ⵉⵙⴼⵔⴰⵏ, and believe in their efficacy. This is also due to the fact that they are given to them free, for under no circumstances does the Tuareg like to loosen his purse strings, and he never ceases to beg for anything he sees that he hopes to get for nothing.

However this may be, it is good to note that he comes very willingly to be treated by us. A French doctor would certainly be very well received by the Tuareg.

The most usual diseases among them are fever, "tazzaq" ⵜⴰⵣⵣⴰⵇ, gonorrhea, "talaoaɣt;" rheumatism, "tessemdhi" ⵜⵙⵙⵎⴷⵀⵉ: and headaches, "tekmou-n-ir'ef" ⵜⴽⵎⵓ ⵏ ⵉⵔⵄⴼ.

Chapter XVII

Negroes and Negresses

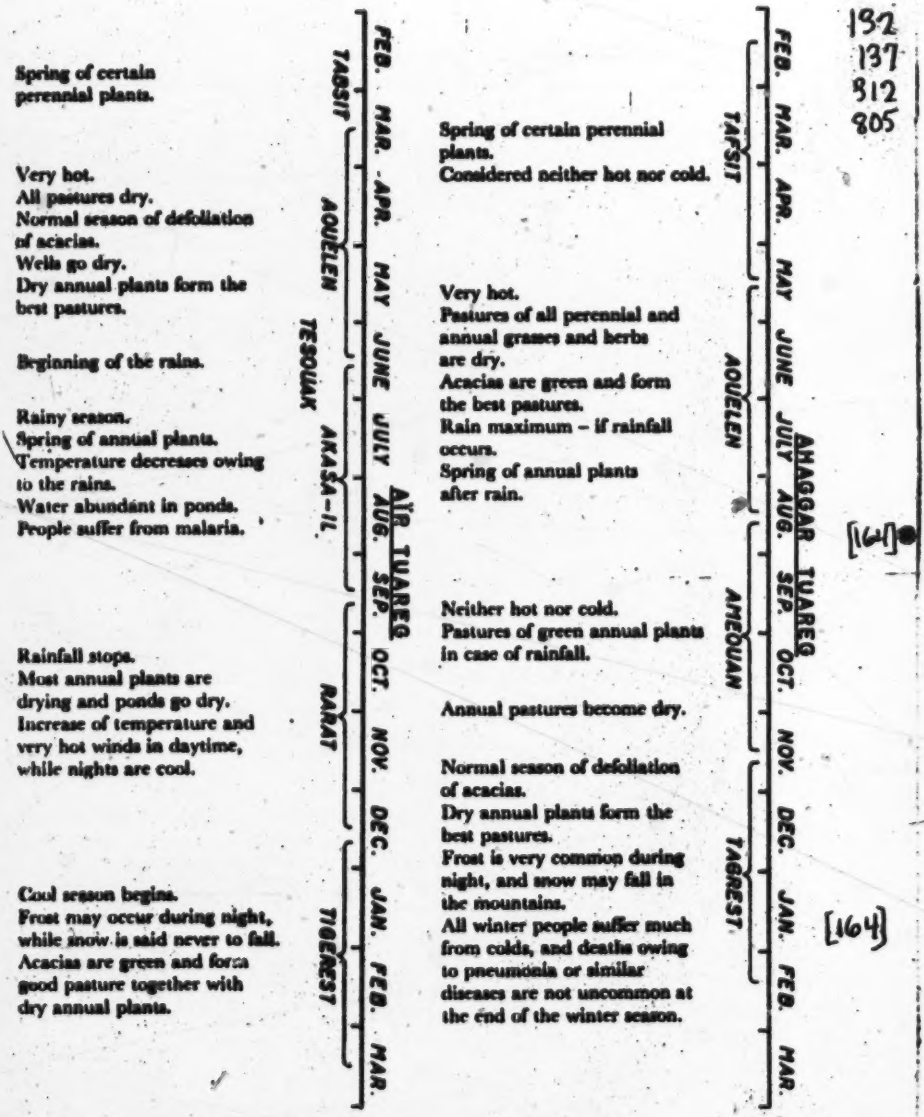
There is no Tuareg tent which has not at least its negro and negress. The frequent raids that the Ahaggar made in the Niger and in the Sudan procured them all the slaves they have.

They devoted themselves greatly to the Negro trade, which brought them fine profits since they had only to take the negroes without expense.

The conquest of the Sudan and the Saharan Oases gave them a terrible blow from that standpoint. Besides, with the progressive pacification of their territory and that of the neighboring tribes subject to them, they would soon have to renounce all hope of new raids, and one may say that the Negro trade, if not entirely destroyed, will at least be considerably diminished.

5: Nicolaisen E-4, 5 (1951-1955) 1959
MS25 Tuareg MS25
Ahaggar
Air

132
137
812
805


AIR TUAREG
FEB. MAR. APR. MAY JUNE JULY AUG. SEP. OCT. NOV. DEC. JAN. FEB. MAR.
TAFSIT
AOUELEN
TEBOUAK
AKASA-IL
RARAT
TIGEREST
Spring of certain perennial plants.
Very hot.
All pastures dry.
Normal season of defoliation of acacias.
Wells go dry.
Dry annual plants form the best pastures.
Beginning of the rains.
Rainy season.
Spring of annual plants.
Temperature decreases owing to the rains.
Water abundant in ponds.
People suffer from malaria.
Rainfall stops.
Most annual plants are drying and ponds go dry.
Increase of temperature and very hot winds in daytime, while nights are cool.
Cool season begins.
Frost may occur during night, while snow is said never to fall.
Acacias are green and form good pasture together with dry annual plants.
AHAGGAR TUAREG
FEB. MAR. APR. MAY JUNE JULY AUG. SEP. OCT. NOV. DEC. JAN. FEB. MAR.
TAFSIT
AOUELEN
AHEOUAN
TAGREST
Spring of certain perennial plants.
Considered neither hot nor cold.
Very hot.
Pastures of all perennial and annual grasses and herbs are dry.
Acacias are green and form the best pastures.
Rain maximum – if rainfall occurs.
Spring of annual plants after rain.
Neither hot nor cold.
Pastures of green annual plants in case of rainfall.
Annual pastures become dry.
Normal season of defoliation of acacias.
Dry annual plants form the best pastures.
Frost is very common during night, and snow may fall in the mountains.
All winter people suffer much from colds, and deaths owing to pneumonia or similar diseases are not uncommon at the end of the winter season.

[164]

[164]

Fig. a.–Division of the year into seasons among the Tuareg of Air and Ahaggar. Climatic and botanical characteristics are indicated. (The proper spelling of *tagrest* (tigerest) is *tagrest*, (tigerest) while *rarat* should be written *ravat*).

241 /76 cont./ In connection with the conditions of life in the agricultural centers, I shall reproduce here an extract from notes taken in 1949 during a tour I made in the company of the doctor at Tamanrasset. This year of 1949 was particularly dry and came on the heels of four long dry years.

"After having walked five hours since leaving the Tilokatine wadi, where we spent the night, we came in view of a charming little oasis situated in the Outoul wadi, which 241 has cut a bed through basalt rocks, columns of which are 621 seen along the banks. This was the agricultural center of Tahart.

[162 "There are 63 inhabitants, of whom 17 are children -- 164] suffering from trachoma and conjunctivitis. Two foggaras serve to irrigate the gardens, as well as two wells with water drawn by oxen. The output of the foggaras is diminishing; the harratin have tried digging other wells at the head of the foggara, but they found large blocks of stone at a depth of three meters which prevented them from reaching the water table. A long and wearying work, with primitive means.

"There are about 100 palm trees, which give small, meager dates. Nearly all of the trees are encumbered with djebars; these harratin have no idea whatsoever of how to cultivate palm trees. Those trees that now produce grew from pits haphazardly cast in a garden.

"The only winter crops are wheat and barley; no turnips, no carrots, no beans, no other vegetables that could tide them over in the period between the millet and the wheat crops and that would permit them to let the cereal ripen.

"At this time nearly all the harratin are eating green barley and young tahli shoots.

"A brief calculation will show how insufficiently these cultivators are fed, although they do very hard work in a hard climate:

Year 1948.	Yield of wheat for Tahart	1, 500 kilograms
	Yield of millet for Tahart	300 kilograms
		1, 800 kilograms

162 /109 cont./ here the cause of the greater proportion of men
165 to women.
847 The most widespread disease in the Ahaggar is undoubted-
ly malaria, most often contracted in Sudanese territory and
●164 spread in the Ahaggar, where anopheles are numerous in the agricultural centers and at all the permanent or temporary water points. Professor Rémy of the faculty at Nancy has found them in the Tarahouaout tiggert /outflow of water/, at the In-Ezzebib guelta /pool/; the doctor, Captain Galan, has collected them in the Afilal guelta at an altitude of nearly 2, 000 meters.

Pneumonia and its pulmonary complications wreak the most havoc among the Tuareg; this is due to the winter cold, which is ill borne in too thin clothes.

[131] In 1949 an epidemic of measles took on the aspect of a catastrophe through its pulmonary consequences.

Venereal diseases are very common among the harratin, rarer among the Tuareg.

A distressing disease of the agricultural centers is trachoma, aggravated by every type of conjunctivitis transmitted by the flies that swarm and cluster around the /110/ eyes of children. The Tuareg seem immune to diseases of the eyes; they rarely have trachoma.

Smallpox, once so common and so feared, has practically disappeared, thanks to systematic vaccination. It was an unusual event to see two Tuareg return from the Sudan in April, 1951 covered with smallpox eruptions.

Tuberculosis does not seem to have appeared; skin tests made at the Tamanrasset school are negative for children born in the Ahaggar. There seems to be no manifestation of cancer.

Although the Tuareg are abundantly provided with lice, above all in the winter, as are the harratin, a case of typhus has never been known. Typhoid is unknown, as are diphtheria, tetanus, and poliomyelitis.

164 /110 cont./ The country then is sufficiently free of serious
114 diseases; one scourge, however, must be noted: malnutrition, described and well studied by the doctor, Captain Galan, in a publication of the Pasteur Institute of Algeria: Contribution à l'étude du problème alimentaire au Hoggar /Contribution to the Study of the Nutrition Problem in the Ahaggar/.

757 The Tuareg and the Negroes are beginning to like
278 European medication and are coming more frequently to the infirmary; they value above all aspirin, quinine (which is becoming a generic term for all pills), and penicillin. They remain faithful to their pharmacopoeia, chiefly based on plants, of which here are several examples:

Pulmonary diseases: strong pimento and rellachem /see Appendix, Flora/ are specifics; for pleurisy, one must melt camel fat with the ta'lnoust (fruit of the acacia), eat it as hot as possible, and constrict one's chest with a rope.

For the stomach, butter mixed with tahist.

In cases of diarrhea, takamezout is the sovereign remedy, taken in tea or eaten in leaf form. This takamezout has a great reputation among the Tuareg: it comprises, they say, 40 remedies, but will not heal broken legs.

Constipation is vanquished by adjardjar and taharadjellé. Headaches have no remedy, yet tea is /111/ to be taken in preference to anything else. The liver is treated with ihemhad taken in milk. The victim of ganglions at the groin or under the armpit may easily make them disappear by rubbing them lightly with saliva very early in the morning; another method, more efficient, consists of heating goat dung and placing it on the nails of the affected member.

[752] For an open wound, make a plaster with milk and powdered tassa.

Rheumatism is easily treated; a sort of well is dug, one meter in diameter and 1.50 meters deep, the patient gets in it, a cover is put on the well, and the patient is given an infusion of o'laq to make him sleep. A spring called In-Ahadja exists which is supposed to be equally as good in treating rheumatism.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

133 Massif resembles Ahaggar, but it is on the whole much more level with broader valleys and in between the lower mountains there are clayey plains. Immediately east of the Massif is the very extended sandy [131] desert which is uninhabited. Further south than Adrar-n-Foras and Ayr there are no considerable mountains. Between the two massifs are the plains of Tamesna and Talak which continue into the plains of the Sudanese savannah.

Tuareg country consists predominantly of rocky mountains and flat, extensive plains of gravel and stone. This configuration is basic to our understanding of Tuareg economy as will become clear when we have outlined the characteristic features of climate.

132 Tuareg country is very hot in summer – so hot that even the nomads born and bred in the country suffer much from the heat at that season. The hottest months are May, June (farthest south) and July (farthest north). During these months temperature may exceed 50° centigrade, and is on average 30°–35°, or higher. In the uppermost mountain zone of Ahaggar nights are comparatively cool even in summer, while in the lower country there is often little difference between day and night temperatures. This is true in particular when, as often happens in summer, the sky is overcast during the night and consequently there is little radiation of the heat absorbed by rocks and sand in daytime. The day temperature in summer is normally higher than the temperature of the human body, and the [484] temperature of sand and rocks will rise to 60°–70°. Travelling is extremely hard under such conditions, [271] and most people spend the day in the shade of rocks and trees, sleeping and drinking water of which an adult person consumes 8–10 litres a day. Violent winds are common in the Sahara most of the year and in particular in the daytime; in summer these winds are usually very hot and add considerably to the discomfort of the climate, as do the numerous flies.

The country of the Northern Tuareg has a rather continental climate characterized by great fluctuations of temperature during the year. Although Tuareg suffer from heat in summer, they do not generally complain much about it, and they consider the comparatively cold winter much worse than the hot summer. In winter, temperature in the country of the Northern Tuareg averages about 10°. The absolute minimum temperature however is very much below this. Thus in Ahaggar the village of Tamanrasset (1400 m) has in January an average temperature of 11,7°, but an absolute minimum of −6,6°. Frost is very common during winter nights, and even snow may fall in the higher parts of Ahaggar at that time of the year. In the country of the Southern Tuareg frost may also occur, but in Southern Ayr around Agadez frost is said to be very rare and snow is unknown; the winter period [511] in the south is on the whole milder than in the north, where the changes between relatively cold and [164] very hot temperatures, allied with inadequate dwellings and clothes, are responsible for pneumonia and similar diseases, which give rise to frequent deaths – especially among children.

The most important climatic distinction between the countries of Northern and Southern Tuareg is due to differences in the annual precipitation as will be seen from the following figures (in m/m) for the annual rainfall 1931–1945 in the territories of seven Tuareg groups:—

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

ants is collected and put into the millet mortar and pounded. The pounded mass of ants is then placed on the affected individual at the spot where blood and pus have penetrated the skin. The disease is characterized as very dangerous for human beings as blood and pus may emerge at any place of the body, and can, for instance, destroy an eye. The Ayr Tuareg say that they have no remedy against *tandert* when it affects their sheep and goats. The disease *tandert* can hardly be anything but anthrax. According to information from the veterinary surgeon Niels Grunnet much indicates that the contagious disease *changa* is also anthrax.

Foucauld has recorded a few contagious stock-diseases from Ahaggar:— *tarut*, a lung disease affecting cattle, goats, and camels. The lungs are filled with pus, and the animals die in four to ten days. *tehareṛet*, a disease attacking sheep and goats which will die with yellow entrails. *weñhet*, a contagious disease attacking jackals, dogs and related animals which will die quickly. It is not the true rabies. *talekmet*, apparently a kind of scrofula which affects the udders of female domestic animals. These do not necessarily die from the disease but their udders may wither (Foucauld 1951–52, IV, p. 1558, 1663, III, p. 1509, 1044). Dr. Grunnet has informed me that *tarut* could be the pulmonary form of *pasteurellosis* also called *haemorrhagic septicaemia*, while *weñhet* may very well be distemper. The *talekmet* disease according to Dr. Grunnet is not easy to identify by the present information, but three conditions are possible:— 1) cow pox, 2) *actinomycosis* of the udder, and 3) *mastitis*. The Ahaggar Tuareg, like the Ayr Tuareg, do not seem to have any remedies against such contagious diseases which incidentally are rare. But there are many other stock-diseases and treatments for them.

The Ayr Tuareg have mentioned to me about thirty different names of camel diseases. The description of these diseases was frequently difficult to understand, and I noted only the following names:—

azni, that is a disease of congestion due to heat-apoplexy which is cured by bleeding with a knife or with tobacco powder put into the camel's eyes.

tadanak, an eye disease cured by cutting around the eyes and by the insertion of salt.

ichilchal, a nose disease cured in the following way:— The handle of a wooden spoon is put up through the nostril to pierce the septum, and heated butter is poured into the animal's nose.

inefdan, a diseases which gives the camel a swollen and inflamed head. A cure is effected by cutting with a knife and by burning.

tara, a kind of chill which causes pregnant she-camels to miscarry. There is no good remedy for it, but it is normal practice to pour water over the affected animal.

lejwad, a paralysis of the hind thighs of camels. The affected animals cannot stand up. The only remedy is a very difficult operation:— A vein is opened in the hind thigs to let out a great quantity of blood. Bleeding is stopped again by sewing together the cuts, which are finally treated with fire.

tibayaɣ, a disease which prevents the pregnancy of mated she-camels. The remedy for this consists in cutting slices around the vagina and under the tail so that blood flows. After this operation, which I have frequently attended, it is said that she-camels will become pregnant when mated.

sanes, a disease which prevents the pregnancy of she-camels. It is treated by putting the hand and the arm deeply into the anus of the camel. I have seen it performed once, and in this particular case the she-camel became pregnant shortly afterwards. According to Dr. Grunnet this disease is very probably *corpus luteum* which is squeezed out of the ovary by the manipulation.